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ABSTRACT

During a 5-month period, an attempt was made to describe the literacy concepts of 12 children 5 years of age who attended a prekindergarten program rich in oral language experiences. Assessments were made in the classroom of the children's concepts of print, phoneme awareness, logo recognition, reading, and writing, through use of (1) the Metropolitan Readiness Tests, Early School Inventory: Preliteracy; (2) Hagtvet's Phoneme Awareness test; (3) Nurss' Logo Recognition task, (4) Hagtvet's Reading Tasks instrument; (5) writing tasks; and (6) performance during a curriculum unit on fairy tales. Findings indicated that the children needed more exposure to books, stories and "language experience dictation" to further develop print and story concepts. They required more opportunities to write their own stories, messages, and captions. They needed continued opportunities to retell and dramatize stories using puppets and the flannel board. Correlations among variables suggested that aural skills of hearing and blending sounds have an important relationship to visual concepts of print, understanding of the reading task, and recognition of some whole words and symbols. Three data tables are included. (RH)

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Some Indicators of Literacy Development in Prekindergarten: A Research Report

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Introduction

Young children acquire written language--writing and reading--in a manner similar to oral language--speaking and listening. Recent studies (Clay, 1975; Ferreiro & Teberosky, 1981; Harste, Woodward, & Burke, 1983; Schickedanz, 1982; Taylor, 1983) all document the process by which the child extracts information about the written language from the envrionment and develops hypotheses about how to use written language as a communication tool. In order for the child to be successful in this process, there must be a rich oral and written language environment. Initially the child responds to print within the meaningful context, and gradually the child responds to decontextualized print.

Of interest to early childhood teachers and researchers is the literacy information held by young children who are acquiring language through their home and prekindergarten environments. This study addressed the question of what indicators of literacy development are present in a group of five-year-old children attending a prekindergarten with a rich oral language program.

Method

Subjects. This study was completed in the Child Development Center of an urban university in a large southern city in the United States. Subjects were the five-year-old children in the Preschool II class, all of whom would attend public school kindergarten the following year. Data were collected from January through May, 1987. There were 12

subjects, who ranged in age from 5 years, 2 months to 5 years, 9 months at the end of May. There were 6 girls and 6 boys. One child was Oriental, one was Black, and the others were Caucasian. English was the first language spoken by all of the children although the Oriental child and one other child, who had an Hispanic step-father, also spoke Chinese and Spanish, respectively. All the children had at least one parent who was a university student at the time of their enrollment in the University's Child Development Center. Three subjects dropped out of the Center at the end of the Winter Quarter (mid-March), because their parents did not enroll in the University for Spring Quarter.

Data Collection. Data were collected by the researcher, who spent at least one morning per week in the classroom observing and assessing the children. Assessments were made of the children's concepts of print, phoneme awareness, logo recognition, reading, and writing. All data were collected in the children's classroom. The following instruments were used.

Metropolitan Readiness Tests, Early School Inventory: Preliteracy (Nurss & McGauvran, 1986). This instrument is designed to assess 5 to 7 year old children's concepts of reading, writing, and story. The child's understanding of what is read is assessed by selecting from three pictures the one with print on it; for example, a menu selected from pictures of a menu, hot dog, and blank mustard container. The child then tells why that print would be read (to see

what food one can order or how much it costs). Finally the child indicates how one reads by demonstrating where one would begin reading, the direction one would read, and by pointing to print, a word, letter, and other aspects of print on another card with a picture and print. In the writing section the child is asked to write her/his name and a message to someone (parent, teacher); these attempts are compared to a standardized rating scale. Finally the child is asked to retell the story of the Three Bears and the child's retelling is scored for designated aspects of story structure. This standardized observation instrument has national norms, providing Performance Ratings and cumulative percentages for each section by age group. Kuder-Richardson 21 reliability for this age group is r = .81.

Phoneme Awareness (Hagtvet, 1983). This instrument is designed to assess children's awareness of phonemes. They select from among 10 pictures the one depicting a 3-phoneme word that has been pronounced with the three phonemes separated. If they can not do so, the first two phonemes are blended and followed by the third phoneme. For example, "sun" was pronounced /s/ /u/ /n/, followed by /su/ /n/. This task was translated and adapted from a Norwegian task developed by Bente Hagtvet, who based it upon work of Ake Olofsson of Sweden.

Logo Recognition (Nurss, 1987). This task required the child to identify 12 common logos such as McDonald's and K-Mart. They were then asked to read the same 12 words in

decontextualized print.

Reading Tasks (Hagtvet, 1986). This instrument assesses the child's oral reading of phrases (a green ball), words (cat), and letters. It was translated and adapted from a Norwegian task used by Bente Hagtvet, who based it upon work of Ingvar Lundberg, University of Umea, Sweden.

Writing Tasks. Each child was asked to draw a picture, write her/his name on the picture, and write something about the picture. The children did this task twice, once in early January and again in late May. They also drew a picture of their favorite fairy tale and dictated what they liked about that story. They then copied the sentence they had dictated. The results were scored using a rating system of 0 (No Attempt), 1 (Scribbling), 2 (Letter-like Symbols), 3 (Separate Letters or Numerals), 4 ("I can't write.), 5 (Asked to have a model to copy), 6 (Asked for letters or sounds), 7 (Invented phonemic spelling), and 8 (Correct Spelling) (Nurss, in press).

Fairy Tale Project. The curriculum for this class was developed through integrated units. During the first three weeks of the Spring Quarter, the teachers in this class taught a unit on fairy tales. Activities included reading a wide variety of fairy tales in differing versions; viewing filmstrips and video tapes of fairy tales; retelling the fairy tales using a flannel board or puppets; illustrating the fairy tales for wall murals and mobiles; dictating language experience stories which were recorded in individual

fairy tale books and illustrating these stories; discussing the parts of the fairy tales (characters, setting, time, beginning, ending, story sequence, feelings, fact vs. fantasy); dramatizing the Billy Goats Gruff with props; writing their own fairy tale using the word processor; illustrating their favorite fairy tale; making cut-and-paste and cookie Gingerbread Boys; making puppets of the Three Pigs; singing songs, doing finger plays, and playing musical games based upon fairy tales; and using cut-outs from various fairy tales for classification, sorting, one-to-one correspondence, comparison, and numeration activities. Fairy tales included, Goldilocks and the Three Bears, The Three Pigs, The Gingerbread Boy, Rumplestiltskin, Little Red Riding Hood, Jack and the Beanstalk, Hansel and Gretel, Stone Soup, and the Ugly Duckling.

Results

The purpose of this study was to describe the literacy concepts of these prekindergarten children. Table 1 presents the results of the five groups of tasks administered.

Insert Table 1 about here

Interrelationships among the tasks were determined by calculating the intercorrelations among the variables. These are presented in Table 2. To determine if growth in the

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Insert Table 2 about here

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writing tasks occurred during the five month period of the study, *t*-tests were calculated between the January and May scores on the name and caption writing tasks. There were no differences (Names: t (8) = 1.00, p = .35; Captions: t (8) = 0.14, p = .89). Nor were there differences between the copying and caption writing tasks given in May (t (8) = 0.00, p = 1.00).

Discussion

As might be expected with prekindergarten children, many of the children demonstrated mastery of some of the tasks, but not of others. In general, the children were successful in writing their names on the picture task both at the beginning and end of the study and on the Early School Inventory (ESI):Preliteracy.

They also demonstrated a developing understanding of print concepts, especially what one reads. There was a bimodal distribution of scores on why one reads; children either did very well or rather poorly. There was a very wide distribution of scores on how one reads. When compared to the national standardization sample of 60 to 65 month old children who took the ESI:Preliteracy, the average score on print concepts for this group was equivalent to a cumulative percentage of only 18%. The majority of these children received a performance rating indicating that they are in the process of developing these print concepts. The same performance rating was obtained for message writing (average

score equivalent to a cumulative percentage of 52%) and story structure (average score equivalent to cumulative percentage of 31%). More exposure to books, stories, and language experience dictation are needed by these child for them to continue to develop these essential print and story concepts.

On the picture writing tasks the children's captions were, on the average, rated "3", separate letters or numerals. Only a few children used invented spelling. There was very little growth in the five months of the study. Interestingly, the children's copying of their dictation, an unfamiliar task for this group, was at the same level of maturity as their free message writing. Again, more opportunities to try to write their own stories, messages, and captions are needed by this group of children.

When retelling the story, most children included the setting, characters, and sequence of events. However, many omitted conversation and only one included feelings of the characters although a couple had good expression in their voices. Continued opportunities to retell and dramatize stories using puppets and the flannel board will provide more awareness of these aspects of story.

Most children recognized about half of the logos; many who did not say the correct logo name either gave the generic name or other product names within the same category, indicating that the children were associating the logo with a meaningful context. For example, Corn Flakes was read cereal, Colgate as toothpaste, Kroger as store, and Toys 'R

Us as toy store. They were not, however, able to read any of the decontextualized print. Similarly hardly any children could read the phrases or words. Most, on the other hand, recognized about 80% of the letters. These children are beginning to be aware of print (logos and letters), but have not begun to recognize print out-of-context, a necessary step in learning to read.

While a few children found the Phoneme Awareness Task difficult, most could blend the sounds into words and select the correct picture, especially when the first two phonemes were given together. Thus, they are beginning to be aware of separate aural parts of words, a necessary step to spelling and reading.

The intercorrelation matrix yielded some interesting clusters of variables showing a significant relationship to one another. As expected, there were significant intercorrelations among the Print Concepts sections of the ESI:Preliteracy (What & Why, What & How, Why & How). Also the three name writing tasks (ESI:Preliteracy Name, January and May Name) were interrelated. The two Phoneme Awareness Tasks were related to one another as were the two Reading Tasks (phrases and words). The ESI:Preliteracy Message was related to May Caption, but not to January Caption, nor were the January and May Captions related.

Two tasks stand out for their relationship to other tasks. The Phoneme Awareness Task was significantly related to concepts of how one reads, to writing one's name

(ESI:Preliteracy and May Name), and to logo recognition. ESI:Preliteracy Print Concepts (What, Why, How) were related to Reading Words and to Copying (and these two tasks were related to one another). These significant correlations, of course, simply indicate a relationship among these variables, not an explanation of why they are related. However, they suggest that the aural skills of hearing and blending sounds do have an important relationship to visual concepts of print, understanding the reading task, and recognizing some whole words and symbols. Further exploration of the relationship of these aural and visual concepts for this age child is needed.

Print Environment. The Language Rich Classroom Checklist (Taylor, Blum, Logsdon, & Moeller, 1982) was used in this prekindergarten classroom twice, in the beginning of January and the end of May. This instrument allows the observer to rate the print environment on both characteristics and activities. Table 3 presents the results of this checklist. While there was some print in the

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Insert Table 3 about here

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classroom in January and some additional evidence of print in May, there were many areas in which print could have been added. Throughout the five months of this study, there was discussion of written language, the teachers were given articles on emergent literacy to read, and a filmstrip

depicting a print rich classroom with a great deal of natural written language was shared in an inservice staff meeting. The creative, active play and manipulative activities in learning centers in this classroom lend themselves to the addition of more meaningful print which would foster the children's natural acquisition of written language.

Conclusion

The five-year-old prekindergarten children is this classroom are in the process of developing written language concepts. Their development will be aided by experiences with writing and reading in meaningful contexts and by a wide variety of print related activities in the classroom.

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Table 1

Literacy Development Indicators: Descriptive Data (N = 12)

Task	Mean	Median	Standard Deviation	Range	Maximum
ESI:What	7.33	9.00	2.99	4-10	10
ESI:Why	5.50	6.50	3.90	0-10	10
ESI:How	5.58	6.00	2.39	2-8	10
ESI:Name	3.83	4.00	0.58	2-4	4
ESI:Message	3.33	4.00	1.72	0-5	6
ESI:Story	4.17	4.00	2.37	0-7	8
Logos	6.50	6.50	2.65	2-10	12
Logo Print	0.67	0.00	1.07	0-3	12
3 Phonemes	6.67	8.00	2.71	2-10	10
2+1 Phonemes	8.42	9.00	1.98	4-10	10
Phrases	0.17	0.00	0.39	0-1	4
Words	0.42	0.00	0.67	0-2	5
Letters	19.41	22.00	6.76	0-24	24
Jan. Name	7.17	8.00	1.95	3-8	8
Jan. Caption	3.17	3.00	2.17	0-7	8
Copying*	3.33	3.00	1.41	1-5	8
May Name*	7.44	8.00	1.67	3-8	8
May Caption*	3.33	3.00	1.41	2-7	8

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* N = 9

Table 2

Intercorrelations Among the Variables (N = 12)

		2	3	4	5	6	7	8	9	10
1	ESI:What	.93*	.87*	.35	.05	.32	.39	.09	.40	.54
2	ESI:Why		.91*	.20	.07	.29	.36	.08	.33	.46
3	ESI:How			.34	.19	.35	.40	.19	.50	.62*
4	ESI:Name				.06	.02	.06	.20	.54	.65*
5	ESI:Message					-.24	.28	-.33	.24	.27
6	ESI:Story						.42	.24	.19	.24
7	Logos							.19	.67*	.63*
8	Logo Print								.40	.33
9	3 Phonemes									.92*

		11	12	13	14	15	16	17	18
1	ESI:What	.42	.61*	-.10	.58	.21	.70*	.39	.50
2	ESI:Why	.36	.61*	-.22	.44	.17	.81*	.24	.48
3	ESI:How	.57	.69*	-.12	.40	.32	.74*	.43	.24
4	ESI:Name	.13	.20	-.17	.67*	.02	.09	.99*	.09
5	ESI:Message	.45	.18	-.19	.38	.40	-.20	.07	-.71
6	ESI:Story	.42	.37	.10	-.07	-.35	.14	.04	.48
7	Logos	.53	.49	.13	.15	-.18	.07	.10	-.25
8	Logo Print	-.07	-.17	-.47	-.42	-.16	.00	.22	-.10
9	3 Phonemes	.32	.28	-.10	.38	.24	.02	.64	-.34

Table 2, continued

	11	12	13	14	15	16	17	18
10 2+1 Phonemes	.37	.34	-.18	.53	.10	.07	.80*	-.24
11 Phrases		.76*	.32	.19	.51	.44	.12	-.06
12 Words			.38	.35	.20	.81*	.23	.36
13 Letters				-.08	.02	.16	-.23	.09
14 Jan. Name					.14	.13	.66*	.13
15 Jan. Caption						.03	.09	-.06
16 Copying~							.08	.52
17 May Name~								.09
18 May Caption~								

~N = 9
*p < .05

Table 3

The Language Rich Classroom Characteristics and Activities*

	January	May
Characteristics		
Stimuli for reading	2	2
Stimuli for writing	1	2
Choice time activities	3	3
Activities use child's language	0	1
Displays of language products	0	2
Activities		
Place to leave written messages	0	0
Writing tools accessible to children	2	3
Reading materials accessible	2	3
Sign-up for activities	0	0
Written language used for organization	1	0
Evidence of children's dictation	1	2
Variety of activities	3	3
Child-initiated writing	0	0
Sustained silent reading time	0	0
Daily story reading	3	3

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0 = None
1 = Trace
2 = In Evidence
3 = Prominent

*Taylor, N., Blum, I., Logsdon, D., & Moeller, I. (1982). The language rich classroom checklist. Washington, DC: Catholic University.